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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,571	09/21/2001	Hans-Joerg Mathony	10191/1917	5723

7590 09/08/2004
KENYON & KENYON
One Broadway
New York, NY 10004

EXAMINER

BARNES, CRYSTAL J

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 09/960,571	Applicant(s) MATHONY, HANS-JOERG	
	Examiner Crystal J. Barnes	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 2 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-12 and 14 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

Claim 1 recites a communications bus integrated on the printed circuit board and the plurality of arrangements are integrated on the printed circuit board.

Response to Arguments

5. Applicant's arguments, see Remarks on pages 5-6, filed 09 June 2004, with respect to the rejection(s) of claim(s) 1, 2, 4 and 7-15 under 35 USC 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of USPN 6,430,478 B2 to Heckmann et al. and USPN

6. Applicant's arguments with respect to claims 3 and 5 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1, 3, 9-12 and 14^{and 15} are rejected under 35 U.S.C. 102(a) as being anticipated by USPN 6,430,478 B2 to Heckmann et al.

AK
7/16/04

DETAILED ACTION

1. The following is a Final Office Action in response to Amendment After Final received on 09 June 2004. Claim 1 has been amended. Claim 2 has been cancelled. Claims 1 and 3-15 are now pending in this application.

Response to Amendment

2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Objections

3. The warning of duplicate claims 9 and 10 is withdrawn.
4. Claim 15 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Art Unit: 2121

AC.
7/14/04

As per claims ^{and 15} 1, the Heckmann et al. reference discloses a device for one of controlling and regulating an operational sequence in a motor vehicle, comprising: a printed circuit board (see column 4 lines 34-41, "printed circuit board"); a communications bus (see column 3 lines 15-16, "communications bus 4") integrated on the printed circuit board ("printed circuit board"); and a plurality of arrangements (see column 3 lines 11-14, "three control units 3") for performing one of a control and a regulation ("controlling or regulating"), each one of the arrangements ("three control units 3") including a processor (see column 4 lines 20-27, "CPU 5"), a storage unit ("BOOT-EEPROM 7, RAM structural element 8") and an input and output unit ("communications interface 6"), wherein: the plurality of arrangements ("three control units 3") are integrated on the printed circuit board ("printed circuit board"), and are interconnected by the communications bus ("communications bus 4").

As per claim 3, the Heckmann et al. reference discloses further comprising a plurality of voltage regulators (see column 5 lines 39-40, "supply voltage V").

As per claim 9, the Heckmann et al. reference discloses wherein: the plurality of arrangements includes at least three arrangements ("three control units 3").

As per claim 10, the Heckmann et al. reference discloses wherein: the plurality of arrangements includes three arrangements ("three control units 3").

As per claim 11, the Heckmann et al. reference discloses further comprising a plurality of input and output arrangements (see column 5 lines 37-46, "contact pin 14") that are connected to at least one of a sensor (see columns 3 lines 50-56, "sensor technology") and an actuator ("actuating technology") arranged in the motor vehicle (see column 1 lines 7-11, "motor vehicle") and at least one data line (see column 4 lines 13-16, "data bus structure") connected to each of the input and output arrangements ("contact pin 14").

As per claim 12, the Heckmann et al. reference discloses the plurality of arrangements ("three control units 3") one of control and regulate ("controlling or regulating") at least one of an engine management system (see column 5 line 30, "engine management system"), an anti-lock braking system (see column 5 line 28, "ABS system"), body electronics (see column 5 line 29, "temperature control"), a transmission (see column 5 line 29, "engine control"), and an airbag (see column 5 line 30, "airbag").

As per claim 14, the Heckmann et al. reference discloses the communications bus includes a CAN communications bus (see column 2 lines 21-22, "CAN").

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,430,478 B2 to Heckmann et al. in view of USPN 6,326,704 B1 to Breed et al.

As per claim 4, the Heckmann et al. reference does not expressly disclose further comprising an auxiliary energy source.

As per claim 8, the Heckmann et al. reference does not expressly disclose the device is connected to a battery.

The Breed et al. reference discloses

(see column 31 lines 37-39, "... some of the inflator controls can send warning messages if their backup power supply has insufficient charge backup power supply").

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the control device taught by the Heckmann et al. reference with the backup power supply taught by the Breed et al. reference.

One of ordinary skill in the art would have been motivated to modify the control device to incorporate a backup power supply/battery in order to assure reliability and availability of the control device.

11. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,430,478 B2 to Heckmann et al. in view of USPN 4,910,658 to Dudash et al.

As per claim 5, the Heckmann et al. reference does not expressly disclose the communications bus is to be decoupled from a data bus of the motor vehicle.

The Dudash et al. reference discloses

(see column 4 lines 38-46, "... serial configuration ... added or deleted from the system ... selected location along bus 22 ...")

(see column 22 lines 20-28, "... very versatile ... readily expandable so that additional process components may be monitored and/or controlled ...")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the control device taught by the Heckmann et al. reference to include components that are removably connected as taught by the Dudash et al. reference.

One of ordinary skill in the art would have been motivated to modify the control device to include components that are removably connected to provide a versatile and expandable system so that additional components may be monitored and/or controlled.

As per claim 6, the Heckmann et al. reference does not expressly disclose the plurality of voltage regulators are connected to a battery.

The Dudash et al. reference discloses

(see column 11 lines 3-8, "Microprocessor 100 ... SAM power regulator 108 ... bus 22 to a power source. Power regulator 108 comprises a conventional voltage regulator which functions to ensure that a stable voltage level is supplied to the microprocessor 100.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the control device taught by the Heckmann et al. reference to include the conventional voltage regulator and power source taught by the Dudash et al. reference.

One of ordinary skill in the art would have been motivated to further modify the control device taught by the Heckmann et al. reference to include a

conventional voltage regulator and power source to ensure that a stable voltage level is supplied to the microprocessor/CPU.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,430,478 B2 to Heckmann et al. in view of USPN 6,326,704 B1 to Breed et al. as applied to claims 4 and 8 above, and further in view of USPN 6,338,010 to Sparks et al.

As per claim 7, the modified Heckmann et al. and Breed et al. references do not expressly disclose the auxiliary energy source is arranged on a printed circuit board.

The Sparks et al. reference discloses

(see column 3 lines 61-66, "A number of sensors or sensing systems are mounted ... any known sensors or sensing systems operable to sense operating conditions ... and produce sensor signals ...")

(see column 4 lines 57-63, "... any electrical power required ... connector 36 via the vehicle data bus 18 ... second electrical connector 40 ...")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the control device taught by the Heckmann et

al. reference incorporating a backup power supply/battery taught by the Breed et al. reference to include the module housing taught by the Sparks et al. reference.

One of ordinary skill in the art would have been motivated to modify the control device incorporating a backup power supply/battery and the module housing to illustrate various elements in one location included in the vehicle electrical system, thereby facilitating ease of repair/response to vehicle operating conditions.

Allowable Subject Matter

13. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following reference is cited to further show the state of the art with respect to vehicle control/communication systems in general:

USPN 6,226,497 B1 to Güntzer et al.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is

703.306.5448. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 703.308.3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cjb
16 July 2004



Anthony Knight
Supervisory Patent Examiner
Group 3600